



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant BL25p G2 (AMD Opteron (TM) 2218)

SPECfp2000 = 2279  
SPECfp\_base2000 = 2069

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Sep-2006 Hardware Avail: Nov-2006 Software Avail: May-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	57.9	2762	50.0	3202	[Bar chart showing ratio bars for 168.wupwise]			
171.swim	3100	105	2953	97.5	3179	[Bar chart showing ratio bars for 171.swim]			
172.mgrid	1800	98.7	1823	87.9	2048	[Bar chart showing ratio bars for 172.mgrid]			
173.applu	2100	95.2	2205	86.2	2436	[Bar chart showing ratio bars for 173.applu]			
177.mesa	1400	68.6	2042	64.2	2182	[Bar chart showing ratio bars for 177.mesa]			
178.galgel	2900	85.6	3389	75.5	3839	[Bar chart showing ratio bars for 178.galgel]			
179.art	2600	92.5	2812	68.9	3774	[Bar chart showing ratio bars for 179.art]			
183.quake	1300	74.8	1739	69.1	1880	[Bar chart showing ratio bars for 183.quake]			
187.facerec	1900	70.2	2705	68.2	2787	[Bar chart showing ratio bars for 187.facerec]			
188.amp	2200	140	1568	135	1629	[Bar chart showing ratio bars for 188.amp]			
189.lucas	2000	91.3	2192	77.5	2582	[Bar chart showing ratio bars for 189.lucas]			
191.fma3d	2100	119	1762	120	1756	[Bar chart showing ratio bars for 191.fma3d]			
200.sixtrack	1100	127	869	121	911	[Bar chart showing ratio bars for 200.sixtrack]			
301.apsi	2600	156	1671	145	1799	[Bar chart showing ratio bars for 301.apsi]			

### Hardware

CPU: AMD Opteron (TM) 2218  
CPU MHz: 2600  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
CPU(s) orderable: 1,2 chips  
Parallel: No  
Primary Cache: 64 KB I + 64 KB D on chip per core  
Secondary Cache: 1 MB I+D on chip per core  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 8 GB (4x2 GB PC2-5300 CL5)  
Disk Subsystem: 1x36.4 GB 10 K SAS  
Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 3  
SuSE kernel 2.6.5-7.244-default  
Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.4  
AMD Core Math Library 3.6.0  
File System: Linux/ext2  
System State: Multi-user run level 3

## Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library
Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
Portability flags:
 178.galgel: -fixedform
Peak tuning:
 168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3
              -OPT:unroll_times_max=8:unroll_size=128:IEEE NaN_Inf=off:ro=3
              -IPA:linear=on:plimit=50000:callee_limit=5000 -INLINE:aggressive=on
 171.swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
 172.mgrid: -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
              -LNO:fusion=2:fission=1:blocking=off:prefetch Ahead=2 -WOPT:mem_opnds=on:aggstr=0
 173.applu: -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
              -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
              -WOPT:mem_opnds=on +FDO
```



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## Notes/Tuning Information (Continued)

```

178.galgel: -Ofast -OPT:fast_complex-on RM_SOURCES=lapak.f90 +ACML +FDO
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake: -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec: -Ofast -LNO:fusion=2 -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188.ammp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
          -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=on +FDO
191.fma3d: -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
          -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on -fno-math-errno
          -CG:load_exe=1 +FDO
301.apsi: -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

```

BIOS Configuration Notes  
Node Interleaving is Disabled

Other Configuration Notes  
Taskset utility used to bind process to CPU(s)  
Single processor kernel used